

## IN THE CLAIMS:

B 1. (previously presented) A hydraulic system for raising and lowering aircraft landing gear, the system including an actuator which is extendible and retractable to operate the landing gear, the actuator including a movable member in a casing, the movable member being moved relative to the casing in a first direction to extend the actuator when fluid under pressure is supplied to a first side of the movable member while fluid is exhausted from a second side of the movable member, and the movable member being moved in a second direction to retract the actuator when fluid under pressure is supplied to the second side of the movable member while fluid is exhausted from the first side of the movable member, and there being a selector valve selectively to supply pressurized fluid to the first or second side of the movable member, and wherein a valve is provided to permit exhausted fluid from at least one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side respectively of the movable member; and

at least one of a one-way check valve and a restrictor disposed in flow communication with each of the first and second sides of the movable member.

2. (previously presented) A system according to claim 1 wherein the valve is a check valve which is opened as the movable member of the actuator moves relatively in the casing in the first direction to extend the actuator and lower the landing gear.

3. (currently amended) A system according to claim 2 wherein [[he]] the check valve opens to permit exhausted fluid from the second side of the movable member to augment the supplied fluid in response to one of the pressure of the fluid supplied to the first side of the member or a pressure build up in a passage carrying exhausted fluid from the second side of the movable member.

4. (previously presented) A system according to claim 2 wherein a closure device is provided positively to close the check valve when pressurized fluid is supplied by the selector valve to the second side of the movable member.

5. (currently amended) [[A system according to claim 1]] A hydraulic system for raising and lowering aircraft landing gear, the system including an actuator which is extendible and retractable to operate the landing gear, the actuator including a movable member in a casing, the movable member being moved relative to the casing in a first direction to extend the actuator when fluid under pressure is supplied to a first side of the movable member while fluid is exhausted from a second side of the movable member, and the movable member being moved in a second direction to retract the actuator when fluid under pressure is supplied to the second side of the movable member while fluid is exhausted from the first side of the movable member, and there being a selector valve selectively to supply pressurized fluid to the first or second side of the movable member, and wherein a valve is provided to permit exhausted fluid from at least one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side respectively of the movable member; and

wherein a relief device is provided to relieve exhausted fluid which is not recirculated from the at least one of the first and second sides of the movable member as the movable member reaches the end of travel in the casing.

6.(currently amended) A hydraulic system according to claim 1 including a first fluid supply line to the first side of the movable member for supplied fluid from the selector valve when the selector valve is in a first position, and a second supply line to the second side of the movable member for supplied fluid from the selector valve when the selector valve is in a second position, and the [[relief device]] valve which permits exhausted fluid from at least

one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side respectively of the movable member, permitting the exhausted fluid to flow from the second supply line to the first supply line.

7. (currently amended) [[A system according to claim 6]] A hydraulic system for raising and lowering aircraft landing gear, the system including an actuator which is extendible and retractable to operate the landing gear, the actuator including a movable member in a casing, the movable member being moved relative to the casing in a first direction to extend the actuator when fluid under pressure is supplied to a first side of the movable member while fluid is exhausted from a second side of the movable member, and the movable member being moved in a second direction to retract the actuator when fluid under pressure is supplied to the second side of the movable member while fluid is exhausted from the first side of the movable member, and there being a selector valve selectively to supply pressurized fluid to the first or second side of the movable member, and wherein a valve is provided to permit exhausted fluid from at least one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side respectively of the movable member;

a first fluid supply line to the first side of the movable member for supplied fluid from the selector valve when the selector valve is in a first position, and a second supply line to the second side of the movable member for supplied fluid from the selector valve when the selector valve is in a second position, and the valve which permits exhausted fluid from at least one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side

respectively of the movable member, permitting the exhausted fluid to flow from the second supply line to the first supply line; and

wherein the second supply line includes a non return valve at least to restrict the flow of exhausted fluid from the hydraulic system.

8. (previously presented) A system according to claim 7 wherein a restrictor device is provided to enable a restricted flow of exhausted fluid which is not recirculated to by-pass the non-return valve.

9. (previously presented) A system according to claim 1 wherein the selector valve is movable to a first position to permit the flow of fluid therethrough from a source of pressurized fluid to the first side of the movable member, and to a second position to permit the flow of fluid therethrough from the source to the second side of the movable member, and to a rest position in which the source is isolated and fluid may pass from the system to tank.

10. (cancelled)

11. (currently amended) An aircraft having landing gear which is raised and lowered by a hydraulic system including an actuator which is extendible and retractable to operate the landing gear, the actuator including a movable member in a casing, the movable member being moved relative to the casing in a first direction to extend the actuator when fluid under pressure is supplied to a first side of the movable member while fluid is exhausted from a second side of the movable member, and the movable member being moved in a second direction to retract the actuator when fluid under pressure is supplied to the second side of the movable member while fluid is exhausted from the first side of the movable member, and there being a selector valve selectively to supply pressurized fluid to the first or second side of the movable member, and wherein a valve is provided to permit exhausted fluid from at least one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side

respectively of the movable member, the valve including a valve member and a piston disposed in a passage and biased in opposite directions by only a single spring such that the valve member is urged towards a valve seat and the piston is urged toward a stop, the valve member arranged to move off the valve seat in response fluid pressure increases at an inlet in a valve body, the piston movable away from the stop in response to a pilot pressure delivered to a pilot pressure port of the valve body to a position in the passage in which the piston engages the valve member and restrains the valve member against movement off the valve seat in response to the inlet pressure.

12. (previously presented) A valve including a valve member and a piston each received in a passage in a valve body, the valve member and piston being biased apart by a spring such that the valve member is urged towards a valve seat towards one end of the passage, and the piston is urged towards a stop towards an opposite end of the passage, a fluid inlet and a fluid outlet, the pressure of fluid at the inlet when sufficient, acting to move the valve member against the force of a spring off the valve seat to permit fluid flow from the inlet, past the valve seat, to the outlet, and the piston being movable in the passage away from the stop in response to a pilot pressure delivered to a pilot pressure port of the body against the force of the spring to a position in the passage in which the piston engages the valve member and restrains the valve member against movement off the valve seat in response to the inlet pressure.

13. (previously presented) A valve according to claim 12 wherein a channel is provided to permit fluid pressure at the outlet to be communicated to an intermediate region of the passage between the valve member and the piston at least when the piston is engaged with the stop.

14. (currently amended) A valve according to claim 13 wherein the outlet opens into the valve passage and there is a flow path for the fluid under pressure at the outlet past or

through the valve member to the intermediate region when the valve member is in engagement with the valve seat.

15. (previously presented) A valve according to claim 12 wherein the valve is a check valve to permit the flow of exhausted fluid from at least one of the first and second sides of a movable member of an actuator of a hydraulic system which includes an actuator which is extendible and retractable to operate landing gear of an aircraft, the actuator including a casing, the movable member being moved relative to the casing in a first direction to extend the actuator when fluid under pressure is supplied to a first side of the movable member while fluid is exhausted from a second side of the movable member, and the movable member being moved in a second direction to retract the actuator when fluid under pressure is supplied to the second side of the movable member while fluid is exhausted from the first side of the movable member, and there being a selector valve selectively to supply pressurized fluid to the first or second side of the movable member, and wherein a valve is provided to permit exhausted fluid from at least one of the first and second sides of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side respectively of the movable member to augment the supplied fluid from the selector valve and thus be directed with the supplied fluid, to the second or first side respectively of the movable member.

16. (cancelled)

17. (cancelled)

18. (newly submitted) A hydraulic system for raising and lowering aircraft landing gear, the system including:

a valve member and a piston each received in a passage in a valve body;

a spring disposed to bias the valve member and the piston apart such that the valve member is urged towards a valve seat disposed adjacent a first end of the passage and the piston is urged toward a stop disposed adjacent a second end of the passage,

a fluid inlet and a fluid outlet,

the valve member arranged to move off the valve seat in response to sufficient fluid pressure at the inlet to permit fluid flow from the inlet, past the valve seat, to the outlet,

the piston movable against the force of the spring away from the stop in response to a pilot pressure delivered to a pilot pressure port of the valve body to a position in the passage in which the piston engages the valve member and restrains the valve member against movement off the valve seat in response to the inlet pressure;

an actuator, the actuator extendable and retractable to operate the landing gear, the actuator including a movable member disposed in a casing, the movable member being movable relative to the casing in a first direction to extend the actuator when pressurized fluid is supplied to a first side of the movable member and exhausted from a second side of the movable member, the movable member movable in a second direction to retract the actuator when pressurized fluid is supplied to the second side of the movable member and exhausted from the first side of the movable member,

a selector valve arranged to supply pressurized fluid to a selected one of the first side and the second side of the movable member,

a check valve arranged to permit exhausted fluid from at least one of the first and second sides of the movable member to augment the fluid supplied from the selector valve and thus be directed with the supplied fluid, to the second or first side, respectively, of the movable member.

19. (Newly submitted) The system according to claim 18, wherein the check valve is arranged to open in response to movement of the movable member in a first direction

extending the actuator to thereby lower the landing gear in response to providing pressurized fluid to the first side of the movable member or in response to pressure buildup in a fluid exhaust passage in flow communication with the second side of the movable member.

20. (Newly submitted) The system according to claim 19, including closure means for closing the check valve in response to providing pressurized fluid to the second side of the movable member.

21. (Newly submitted) The system according to claim 17, including a relief valve arranged to relieve non-recirculated exhausted fluid from at least one of the first and second sides of the movable member as the movable member approaches an end of the casing.

22. (Newly submitted), The system according to claim 17, including a first fluid supply line in flow communication with the first side of the movable member and arranged to supply fluid from the selector valve when the selector valve is in a first position, and a second supply line in flow communication with the second side of the movable member and arranged to supply fluid from the selector valve when the selector valve is in a second position, and wherein the valve cooperates with the selector valve to permit fluid supplied by the selector valve to be directed with fluid exhausted from the first or second side of the movable member from the second supply line to the first supply line.

23. (Newly submitted) The system according to claim 22, wherein the second supply line includes a one-way check valve arranged to restrict the flow of exhausted fluid from the hydraulic system, and a restrictor arranged to enable a restricted flow of fluid that is not recirculated to by-pass the one-way check valve.

24. (Newly submitted) The system according to claim 22, wherein the selector valve is movable to a first position to permit fluid flow to the first side of the movable member, the selector valve further movable to a second put position to permit fluid flow to the second side



of the movable member, the selector valve further movable to a rest position in which fluid from a source is isolated and flows from the system to a tank.

